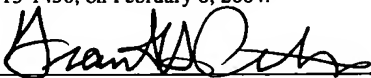


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**PATENT APPLICATION**

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**BEVERAGE CONTAINER  
WITH ONE-WAY VALVE ASSEMBLY**

**Attorney Docket No. 27726/95401**

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## **BEVERAGE CONTAINER WITH ONE-WAY VALVE ASSEMBLY**

### **RELATED APPLICATIONS**

**[0001]** This application claims priority from U.S. Provisional Application No. 60/445,869, filed February 7, 2003.

### **BACKGROUND**

**[0002]** Beverage containers for receiving beverage from a brewer or other source of beverage and for thereafter serving the beverage are known in the art. Such beverage containers typically include a vessel for receiving the beverage, a top opening for receiving the beverage from the source and into the vessel, a spout for dispensing the beverage from the vessel, and a handle for facilitating the dispensing of the beverage.

### **SUMMARY**

**[0003]** The present disclosure relates to one or more of the following features, elements, or combinations thereof:

**[0004]** A beverage container for a brewer or other source of brewed or other beverage that includes a lid and a valve assembly associated with the lid. The lid includes valve structure defining a valve port and the valve assembly comprises the valve structure and a valve grommet received by the valve port. The valve assembly defines a passageway through which the beverage may pass, but prevents or reduces reverse passage of beverage, steam or heat therethrough.

**[0005]** The valve grommet includes a valve flange defining an aperture and a tongue extending from the valve flange adjacent the aperture. A gasket is included with the grommet integral with the flange, extending circumferentially from each side of the tongue for sealingly engaging the lid. The valve grommet may be constructed of a flexible material.

**[0006]** The lid also includes a top surface and a bottom surface, and the valve structure includes an accurate wall extending downwardly from the top surface, a base, a pair of ribs and a wall which further define the valve port. The base includes a curved portion defining a drain recess. The wall has an inverted L-shaped cross section extending up from the bottom surface and then onward to adjacent the top surface to define a lip. The lip and the ribs define a channel for receiving the tongue

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of the valve grommet. The ribs separate the channel from the valve port.

[0007] The lid is positioned on a vessel for storing the beverage, and the container may be positioned beneath the brewer or other source, such that beverage, produced or provided by the brewer or other source, passes through the aperture defined by the valve grommet and the valve port. The weight flow action and/or pressure of the beverage within the valve port causes the tongue of the valve grommet to flex, shutter or otherwise be displaced outward adjacent the drain recess, to an open position so that the brewed beverage can pass through the valve port and into the vessel. The lid may also define a recess, including a reservoir, to allow overflow beverage to accumulate if necessary as brewed beverage is supplied to the valve port.

[0008] Once the supply of beverage passes into the vessel, the tongue of the valve grommet flexes, shutters or is otherwise displaced back to a closed position to prevent beverage from passing back into the valve port. The beverage container can thereafter be used to distribute beverage.

[0009] Accordingly, the flexibility of the tongue enables the valve assembly to operate in a one-way manner such that it enables beverage to pass into the vessel but prevents beverage received by the vessel from passing outside the vessel. The flexibility of the valve grommet also enables it to be quickly and easily removed from the valve port by, for example, manually grasping, squeezing and removing the valve grommet, for cleaning.

[0010] The lid may also include an engaging arm to facilitate rotation of the lid relative to the vessel between open and closed or attaching positions. The lid may also define a dispensing recess positioned generally opposite the dispensing arm for dispensing of beverage from the vessel. The lid and the vessel may be configured to define a torturous dispensing passageway.

[0011] The present disclosure also may relate to one or more of the features, elements or combinations thereof described in the accompanying drawings described below or the Detailed Description of the Drawings set forth below.

[0012] Additional features will become apparent to those skilled in the art upon consideration of the following description exemplifying the best mode as presently perceived.

#### BRIEF DESCRIPTION OF DRAWINGS

[0013] The detailed description particularly refers to the accompanying figures in

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which:

[0014] FIGURE 1 is a perspective view of a thermal carafe in accordance with an embodiment of the description;

[0015] FIGURE 2 is a side plan view of the thermal carafe of FIGURE 1;

[0016] FIGURE 3 is a top plan view of the thermal carafe of FIGURE 1;

[0017] FIGURE 4 is a cross section view taken along lines 4-4 of FIGURE 1;

[0018] FIGURE 5 is a partial fragmentary enlarged view of FIGURE 4, illustrating the valve assembly of the carafe of FIGURE 1;

[0019] FIGURE 6 is a top perspective view from the top of the valve grommet of the valve assembly of the carafe of FIGURE 1;

[0020] FIGURE 7 is a bottom perspective view from the bottom of the valve grommet of the valve assembly of the carafe of FIGURE 1;

[0021] FIGURE 8 is a top plan view of the cover of the carafe of FIGURE 1 with the valve grommet removed;

[0022] FIGURE 9 is a partial and enlarged perspective view of the cover of the carafe of FIGURE 1 with the valve grommet removed; and

[0023] FIGURE 10 is a partial and enlarged view of FIGURE 4, illustrating the spout of the carafe of FIGURE 1.

#### DESCRIPTION OF THE DRAWINGS

[0024] While the present disclosure may be susceptible to embodiment in different forms, there is shown in the drawings, and herein will be described in detail, at least one with the understanding that the present description is to be considered an exemplification of the principles of the disclosure and is not intended to limit the disclosure to the details of construction and the arrangements of components set forth in the following description or illustrated in the drawings.

[0025] FIGURES 1-10 provide an illustrative embodiment of a beverage container in the form of a thermal carafe 10 for a brewer or other source of brewed or other beverage. The carafe 10 includes generally a vessel 12 for storing the brewed beverage, a handle assembly 14, a valve grommet 16, and a lid 18 including valve structure 19 defining a valve port 20. The thermal carafe 10 includes a one-way valve assembly 21, comprised generally of the valve grommet 16 and the valve structure defining the valve port 20. The valve assembly 21 provides a passageway 28 through which the beverage may pass into the a cavity 23 defined by a wall 25 of vessel 12,

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but prevents or minimizes reverse passage therethrough of brewed beverage received by the vessel 12.

[0026] The valve grommet 16 is received by the valve port 20, and includes a valve flange 30 defining an aperture 32 and a tongue 34 extending from the valve flange 30 adjacent the aperture 32. The bottom of the flange 30 may include an arcuate indentation or groove 36 for seating against a corresponding surface or protrusion 37 within the valve port 20. The valve grommet 16 also includes a gasket 40 integral with the flange 30, extending arcuately from each side of the tongue 34 for sealingly engaging the lid 18. The valve grommet 16 may be constructed of a flexible material such as any suitable elastomer or the like.

[0027] The lid 18 includes a top surface 42, a bottom surface 44 and a peripheral rim 46. The top surface 42 defines a recess 50 and includes a concave portion 52 and a pair of upwardly-extending walls 54 which define a reservoir 56 disposed about the recess. The upwardly-extending walls 54 are spaced apart from each other and extend generally parallel to each other, except that they include a center section in which the walls are generally at least partially arcuate to define an enlarged recess segment 60 that may be positioned directly under the source of the beverage. The recess 50 and reservoir 56 are configured to receive any overflow of brewed beverage passing through the passageway 28 of the valve assembly. The top surface 42, bottom surface 44 and the peripheral rim 44 define an annular internal space 58 that provides insulation benefits. The internal space 58 may include foam or any other insulation if desired.

[0028] The valve structure of the lid 18 includes a partially accurate wall 70 extending downwardly from the top surface 42, an extending base 72, a pair of ribs 74 and an opposing wall 76 which further define the valve port 20. The base 72 includes a curved portion defining a drain recess 78 and passage 79. The wall 76 has an inverted L-shaped cross section extending up from the bottom surface 40 and then extending toward the adjacent top surface 40 to define a lip 80. The lip 80 and the ribs 74 define a channel 82 for receiving the tongue 34 of the valve grommet 16. The ribs 74 separate the channel 82 from the valve port 20.

[0029] The carafe 10 may be positioned beneath the brewer or other source, and beverage brewed, produced or otherwise provided by the source, passes into the valve port 20. The brewed beverage passes through the aperture 32 defined by the valve grommet 16 and into the valve port 20. The weight of the beverage within the valve

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port 20 causes the tongue of the valve grommet 16 beginning adjacent the drain recess 78, to flex or shutter outward to an open position so that the brewed beverage can pass through the valve port 20 and through passage 28 and into the vessel 12. The reservoir 56, including the enlarged recess segment 60, allow overflow beverage to accumulate if necessary as beverage is supplied to the valve port 20.

[0030] Once a supply of the beverage passes into the vessel 12, the tongue 34 of the valve grommet 16 flexes or shutters back to a closed position to prevent beverage from passing back into the valve port 20. The carafe 10 can thereafter be used to distribute beverage, with the tongue 34 remaining in the closed position.

Accordingly, the flexibility of the tongue 34 enables the valve assembly to operate in a one-way manner such that it enables brewed beverage to pass into the vessel 12 but prevents brewed beverage received by the vessel from passing outside the vessel. The flexibility of the valve grommet 16 also enables it to be quickly and easily removed from the valve port 20 by, for example, manually grasping, squeezing and removing the valve grommet 16, for cleaning.

[0031] The lid 18 also includes an engaging arm 90 to facilitate rotation of the lid relative to the vessel 12 between open and closed positions and defines a dispensing recess 92 diametrically opposite the engaging arm for dispensing of brewed beverage from the vessel 12. The engaging arm 90 includes a serpentine engaging face 96 to engage a mating serpentine engaging face 98 on the handle assembly 14. The engaging faces 96 and 98 enable the engaging arm 90 to be readily positioned in the open position. The dispensing recess 92 is defined by a lip 100 of the lid 18 which aligns adjacent a lip 102 on the handle assembly 14 to define a dispensing spout 104 on the handle assembly 14 and to open the dispensing spout to permit pouring of brewed beverage from the vessel 12. The lid 18 also includes a pair of spaced apart guide walls 106 which extend upward along the rim 46 and lead into the lip 100 to define a torturous dispensing passageway 110.

[0032] Accordingly, when the engaging faces 96 and 98 of the engaging arm 90 and the handle assembly 14 are engaged, the engaging arm aligns with the handle assembly 14 such that the handle assembly can be manually held to pour beverage through the spout 104. When the carafe 10 is tilted for pouring, beverage passes through the dispensing passageway 110 and through the dispensing spout 104. To close the spout 104, the engaging arm 90 is rotated, which causes the dispensing recess 92 to rotate relative to the spout and causes the rim of the lid 18 to close the

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spout. The engaging arm 90 defines a curved recess 114 to provide a grip to facilitate rotation of the engaging arm.

[0033] The vessel 12 and handle assembly 14 may have any suitable configuration and may be constructed of any suitable material. In the illustrated embodiment, for example, the vessel 12 is cylindrical and defines a cavity for storing the beverage. The handle assembly 14 includes a handle portion 120, an upper ring 122 disposed about an upper portion of the vessel 12, and a lower ring disposed about a lower portion of the vessel 12. The handle assembly 14 may be constructed in any suitable manner. For example, the upper ring 122 may be assembled with the handle portion 120, and the lower portion 124 may be unitary with the handle portion. The upper ring 122 includes a top rim 130 defining a mouth 131 and a lip 132, which extend substantially circumferentially to define a substantially circumferential recess 134 for receiving the outer rim of the lid 18, with the rim resting on the lip. The lip 102 of the upper ring 122 also defines a pour spout 144 for dispensing the brewed beverage. The handle portion 120 defines a recess 150 to provide a thumb grip.

[0034] Terms including brewed, brewing, brewing substance, brewing liquid, beverage, and brewed beverage as used herein are intended to be broadly defined as including but not limited to the brewing of coffee, tea and any other brewed beverage. This broad interpretation is also intended to include, but is not limited to any process of dispensing, infusing, steeping, reconstituting, diluting, dissolving, saturating or passing a liquid through or otherwise mixing or combining a beverage substance with a liquid such as water without a limitation to the temperature of such liquid unless specified. This broad interpretation is also intended to include, but is not limited to beverage substances such as ground coffee, tea, liquid beverage concentrate, powdered beverage concentrate, freeze dried coffee or other beverage concentrates, to obtain a desired beverage or other food.

[0035] The embodiment set forth in this description is not intended in any way to limit the scope of the present application and appended claims. The embodiment is intended to be expansive and broadly interpreted without limitation. Various features of the disclosed invention have been particularly shown and described in connection with the disclosure as shown and described, however, it must be understood that these particular arrangements and methods merely illustrate, and that the disclosure is to be given its fullest interpretation within the terms of the appended claims.